

REMARKS

Claims 1, 28, 30, 57, 59 and 66 are amended to more clearly recite subject matter considered to be part of the invention and to more clearly distinguish over the applied art. Thus, the term “rules” has been modified to read “business rules” as used throughout the specification:

Embodiments of the present invention may integrate speech recognition software with audio recording equipment and CTI links. When CTI or recording events signal the end of a recording, the system executes business rules to determine if the contact should be monitored. The system sends the audio into a queue to be processed by call center employees. After the audio has been processed, the system executes business rules that analyze the recorded speech. The business rules enable searches for words or phrases, and take actions upon locating (or not locating) the words or phrases, such as collecting statistics, displaying alerts, and generating reports. The business rules are flexible and customizable, and support if/then/else handling, such as Microsoft's.TM. VBA

Paragraph 98 of the published application.

Claim 66 is further amended to more clearly describe a characteristic of the metadata such that the call data therein augments information that might otherwise be extractable from the audio segment:

The system according to claim 65 wherein said data related to said audio segment includes metadata including call data augmenting an information content directly extractable from said audio segment.

This characterization of the metadata is consistent with the types of data described in the specification including:

“...CTI data associated with the audio segment; and providing an indication of satisfaction of a criteria in response to the steps of searching and analyzing. The CTI data may include (i) called number (DNIS), (ii) calling number (ANI) and/or (iii) Agent Id (a unique identifier of the agent that handled the call). ...”

Some advanced features of an embodiment of the present invention rely on a Computer Telephony Integration (CTI) approach. CTI is used here as a generic term to describe a computer system that operates as an adjunct to the ACD/PBX. The adjunct system receives a stream of call related event messages for processing. Additionally, CTI can include the use of CTI

middleware. Commercially available ACD/PBX switches typically include such CTI capability. An advantage to the use of CTI is that almost any available data can be collected and stored with the recording. In its simplest form DNIS, ANI/CLID, collected digits, and agent ID can be obtained and stored. Additionally, more complicated integrations can be performed. CSR entered data, data from a CRM system, and data from an IVR can be collected and attached to recordings. Contacts that span multiple agents can be retrieved together. PBX/ACD features such as free seating are easily accommodated. As new sources of data become available, they can be integrated into the CTI solution.

Outstanding Rejections of the Claims

All claims stand rejected under 35 U.S.C. §103(a) as shown in the following table:

Clements in view of Petkovic	Clements in view of Petkovic further in view of Frakes	Clements in view of Petkovic further in view of Clements
1-9, 11, 13-15, 17, 19-21, 24-28, 30-38, 40, 42-44, 46, 48-50, 53-57, 59, 64 and 70	10, 12, 16, 18, 39, 41, 45 and 47	22, 23, 29, 51, 52, 58, 60-63 and 65-69

In the prior response, applicant amended independent claims 1, 28, 30, 57 and 59 to emphasize that data related to the audio segment is relied upon to formulate rules and thereby define the search. Thus, for example, metadata (e.g. as recited by amended independent claim 59 and new dependent claims 61 and 66) associated with the audio segment is used to determine the appropriate rules (e.g., target phrases or utterances) to be found in the audio segment.

Supported by the revised claim language, applicant pointed out that the prior art failed to describe or suggest the use of data associated with an audio segment to determine a set of rules, a search of the audio segment being performed in accordance with those rules. The Examiner responded by stating that:

As stated in the rejections (of claims 28, 30, 57 and 59), Petkovic discloses a system that has the ability to segment, classify, and search for audio based on the content thereof [i.e., define rules for search based on content] (col. 3, lines col. 13, lines 28-37). For example, Petkovic discusses the classification of audio (i.e., determining its meta pattern genus) and then only send those audio files classified as "newcasts" to the speech recognition engine for further processing and search (col. 7, line 60 through col. 8, line

41). Furthermore, Clements teaches the scanning "messages" for particular keywords (p. 7, §Telephony Opportunities, §3); in other words, if the audio file meets certain criteria (it is a "message"), then it is scanned for particular keywords. Thus Petkovic teaches the classification and assignment of metadata to audio [and the further execution of certain rules related to search], and Clements teaches the execution of rules [the search for certain keywords] relating to message files.

However, even if this characterization is correct, this prior art classification of the audio, including the meta pattern genus, is based on the audio information itself, not call or CTI data to which embodiments of the present invention are directed. Petkovic mentions that intervals of the audio stream can be classified by matching the audio to prestored meta pattern genre and thereby indexed. Thus, a user may select a subset of the audio streams for retrieval. However, this is no suggestion that the information characterizing the audio segment be used to select an appropriate set of business rules. This is to be expected since the classification performed by Petkovic relates to the content of and/or information extracted from the audio segment, not to call data augmenting information contained in or derivable from the audio, such as CTI data. That is, Petkovic at most teaches building indices of audio content based on quick scans of the audio itself, not the use of data augmenting such content, so as to enhance searching of the data. Petkovic and the other art of record are silent in connection with use of data as a criteria for determining an appropriate set of business rules to be applied to and forming the basis of a search of an audio segment. At most, the "rules" referenced by the Examiner are that various search criteria are implemented sequentially, i.e., that the results of an initial scan of the audio segments are then subject to some closer scrutiny.

In contrast to the methods taught by the applied prior art interpreted by the Examiner do inherently constitute "rules", applicant's invention requires that data associated with the audio (e.g., CTI data) be used to determine an appropriate set of business rules. As described in applicant's disclosure, business rules, unlike generalized search methods, refer to rules that determine whether a call should be monitored, checked for certain phrases or words, etc. For example, data indicating that a call is an outgoing call to a potential customer may trigger a search for certain phrases, while incoming calls are governed by a different set of business rules thereby triggering a search of the corresponding audio segments for different phrases. This distinction over the art of record is embodied in the pending claims as amended, requiring:

*determining, in response to data associated with said audio segment,
an appropriate set of business rules to apply to said audio segment;*

(Claim 1);

*determining, in response to said call data, an appropriate set of
business rules to apply to said audio segment;*

Claim 28;

*logic responsive to data associated with said audio segment to
determine an appropriate set of business rules to apply to said audio
segment...*

Claim 30;

*determine, in response to said call data, an appropriate set of business
rules to apply to said audio segment;*

Claim 57; and

*setting business rules, in response to metadata associated with said
audio segment, for searching for spoken words or phrases in said audio
segment using speech recognition technology;*

Claim 59.

In addition to the prior art failing to disclose or suggest the subject matter of the independent claims (and thereby that of the dependent claims), the rejection is further considered to be improper under 35 U.S.C. § 103 for lack of motivation provided by the prior art for making the asserted combination on which the rejections are based.

The Examiner has taken the position that

*...it would have been obvious to one having ordinary skill in the art at the
time the invention was made to modify Clements by specifically providing the
features, as taught by Petkovic, because it is well known in the art at the time
of invention for the purpose of facilitating the process of retrieval...*

or, in the case of Fakes:

...it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements in view of Petkovic by specifically providing the feature, as taught by Frakes, because it is well known in the art at the time of invention for the purpose more effectively retrieving information...

and in the case of Glowny:

...it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements in view of Petkovic by specifically providing the features, as taught by Glowny, because it is well known in the art at the time of invention for the purpose more effectively retrieving...

While the Examiner has described a possible motivation, such motivation is improper when gleaned from the content of applicant's disclosure instead of from the prior art. In the present case, the prior art fails to provide the requisite motivation for the various combinations, modifications and changes forming the basis of the outstanding rejections rendering the rejections improper.

While the reasoning set forth in the Office Action asserts that there were various advantages to be realized by making the asserted combination, merely realizing that a combination provides certain advantages using Applicants' claims as a template amounts to no more than impermissible hindsight. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990). Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." (916 F.2d at 682, 16 U.S.P.Q.2d at 1432.). See also In re Fritch, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992) (flexible landscape edging device which is conformable to a ground surface of varying slope not suggested by combination of prior art references).

It is well established that, even if all aspects of the claimed invention were individually known in the art, such is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). It is, therefore, incumbent upon the Examiner to provide some suggestion of the desirability of doing what

the inventor has done in his formulation, imposition and maintenance of a rejection under 35 U.S.C. 103(a). "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." Ex parte Clapp, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Inter. 1985).

Thus, for the reasons presented, the combinations asserted by the Examiner are believed to be improper thereby rendering the rejection under 35 U.S.C. §103(a) improper. Accordingly, withdrawal of the rejection is respectfully requested.

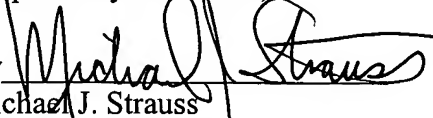
CONCLUSION

As the present amendment adopts language clarifying features of the invention already emphasized to the Examiner so as to place those claims (and therefore the claims dependent therefrom) in condition for allowance, entry of this Amendment in accordance with 37 C.F.R. 1.116, withdrawal of all outstanding rejections and an early notification of allowance of the application including claims 1-70 are respectfully requested.

Applicant concurrently submits a Petition for a (3) Three-Month Extension of Time and the small entity fee of \$510.00. If any further fees are due, please charge our Deposit Account No. 06-2375, under Order No. 436.007/10315732 from which the undersigned is authorized to draw.

Dated: September ~~26~~, 2005

Respectfully submitted,

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